

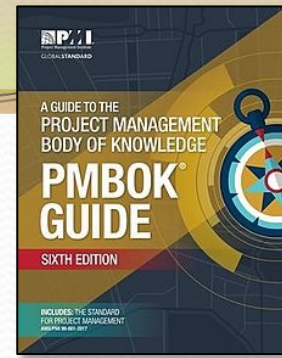
PROJECT MANAGEMENT LESSONS LEARNED

CE 4200 PROFESSIONAL ENGINEERING PRACTICE
ISSUES

Spring 2022 SEMESTER

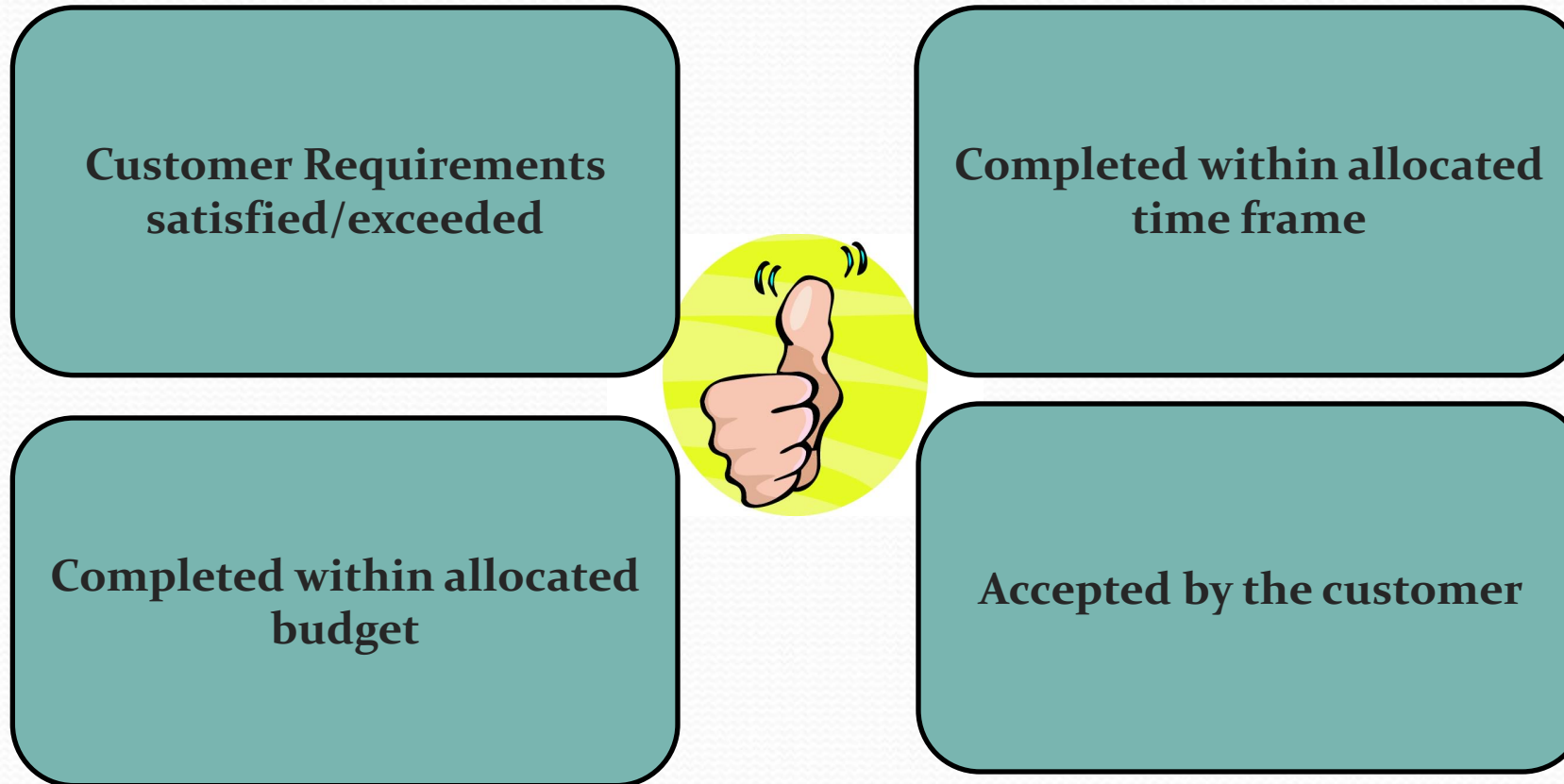
WILLIAM D. LAWSON, PE, PHD

What is Project Management?



- Project Management is the application of skills, knowledge, tools and techniques to meet the needs and expectations of stakeholders for a project.
- The purpose of project management is **prediction** and **prevention**, NOT recognition and reaction

Project Success



Project Failure

Scope Creep

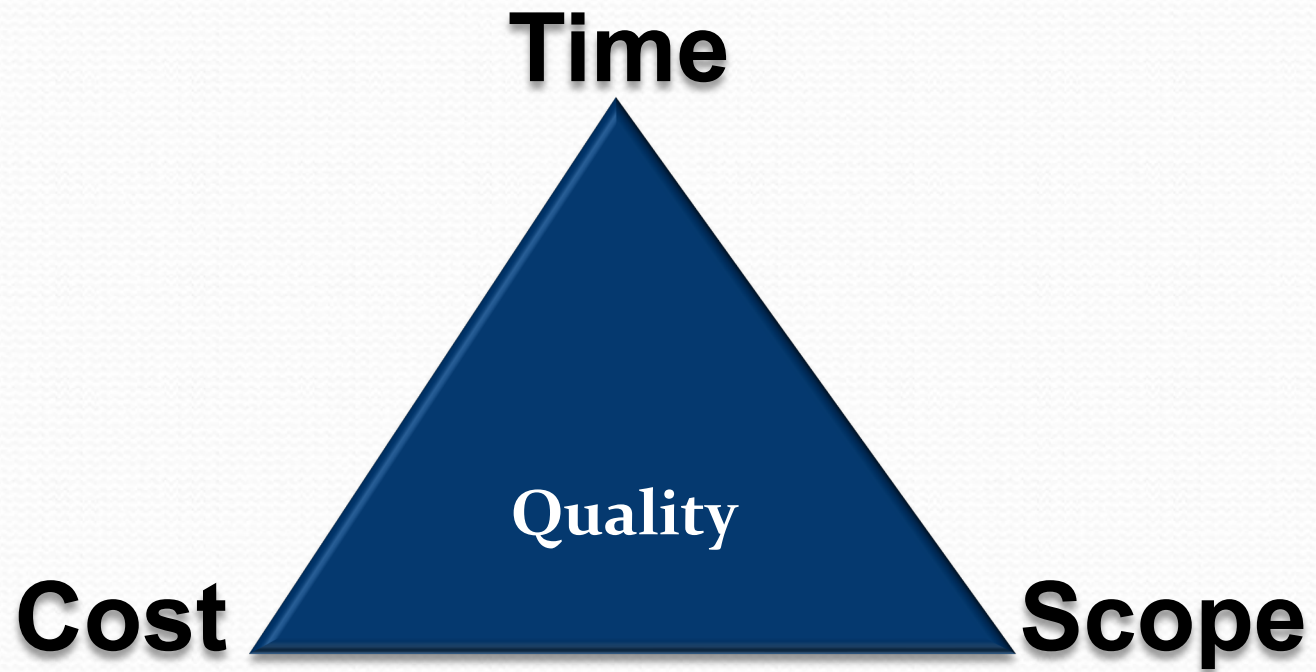
**Poor Requirements
Gathering**

**Unrealistic planning and
scheduling**

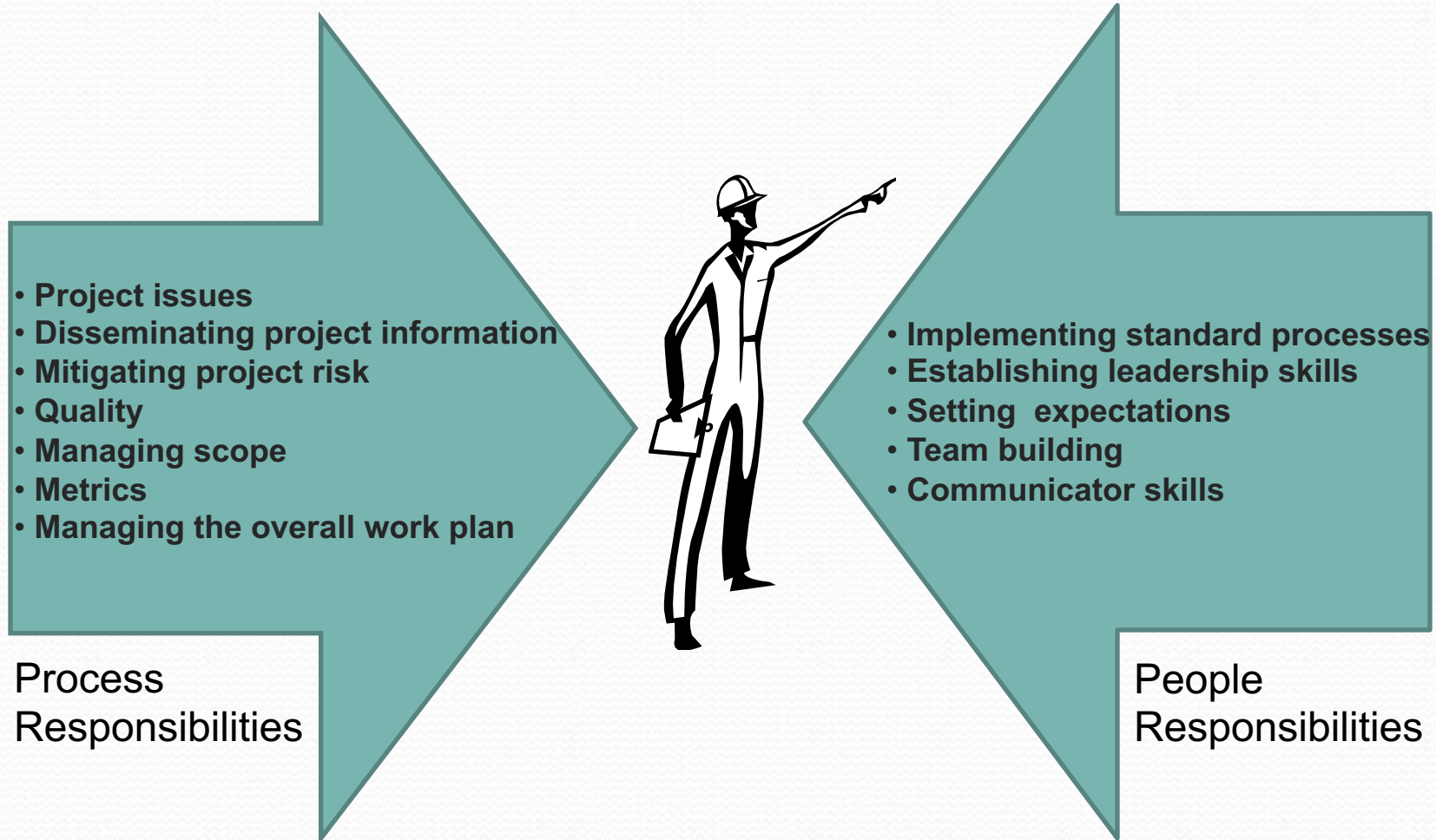
Lack of resources



Triple Constraint



Role of a Project Manager



FAILURE #1. BUDGET

Client: Waste Management of North America

Year: 1995

Project: DFW Landfill, Northwest Sector

Location: Lewisville, TX

DFW LANDFILL, LEWISVILLE, TX



DFW LANDFILL, LEWISVILLE, TX



NORTHWEST SECTOR, DFW LANDFILL



BASIC PROJECT INFO

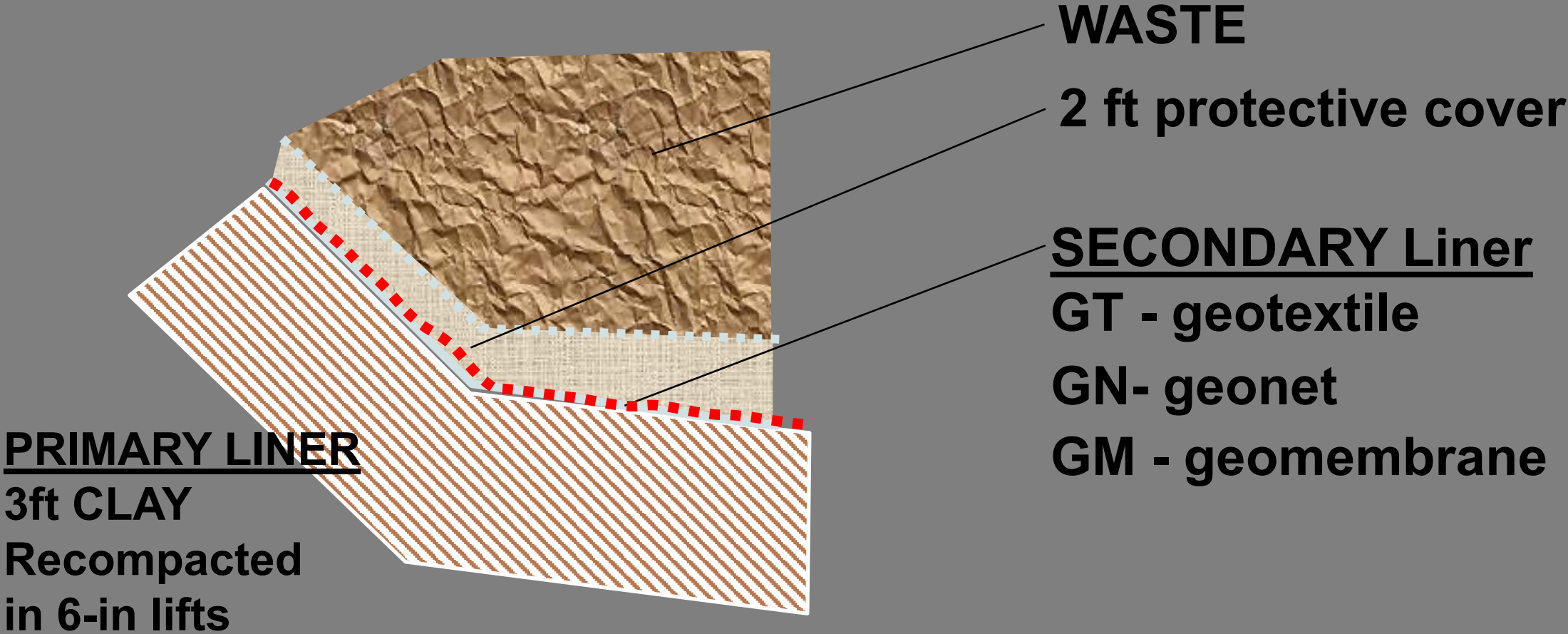
- SIZE: 13 ACRES
- DESIGN/CONSTRUCTION COST: \$2.3MILLION
- PROJECT DURATION: 45 DAYS
- CQC/CQA CONTRACT: \$135,000

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AS BUILT:

- 90+ DAYS
- CQC/CQA CONTRACT: \$250,000

Composite Liner System for Primary Leachate Collection









2 4'90







THE PROJECT MANAGEMENT PROBLEM

- The situation
- What do YOU think happened?
- Here's what happened

LESSONS LEARNED

1. “Hiding” is a natural, but *counter-productive* response to problems
2. Procrastinating does not help either
3. A project manager must know the status (budget, schedule) of his/her project *at all times*
4. Re-creating the project record, after the fact, is time-consuming, painful, and difficult
5. Project management failures like this cost big money
6. Clients are people too, with bosses, just like us, and they deserve answers
7. A solid client relationship can help overcome disaster
8. If a project doesn't go well, do a “*post mortem*”

FAILURE #2. SCHEDULE

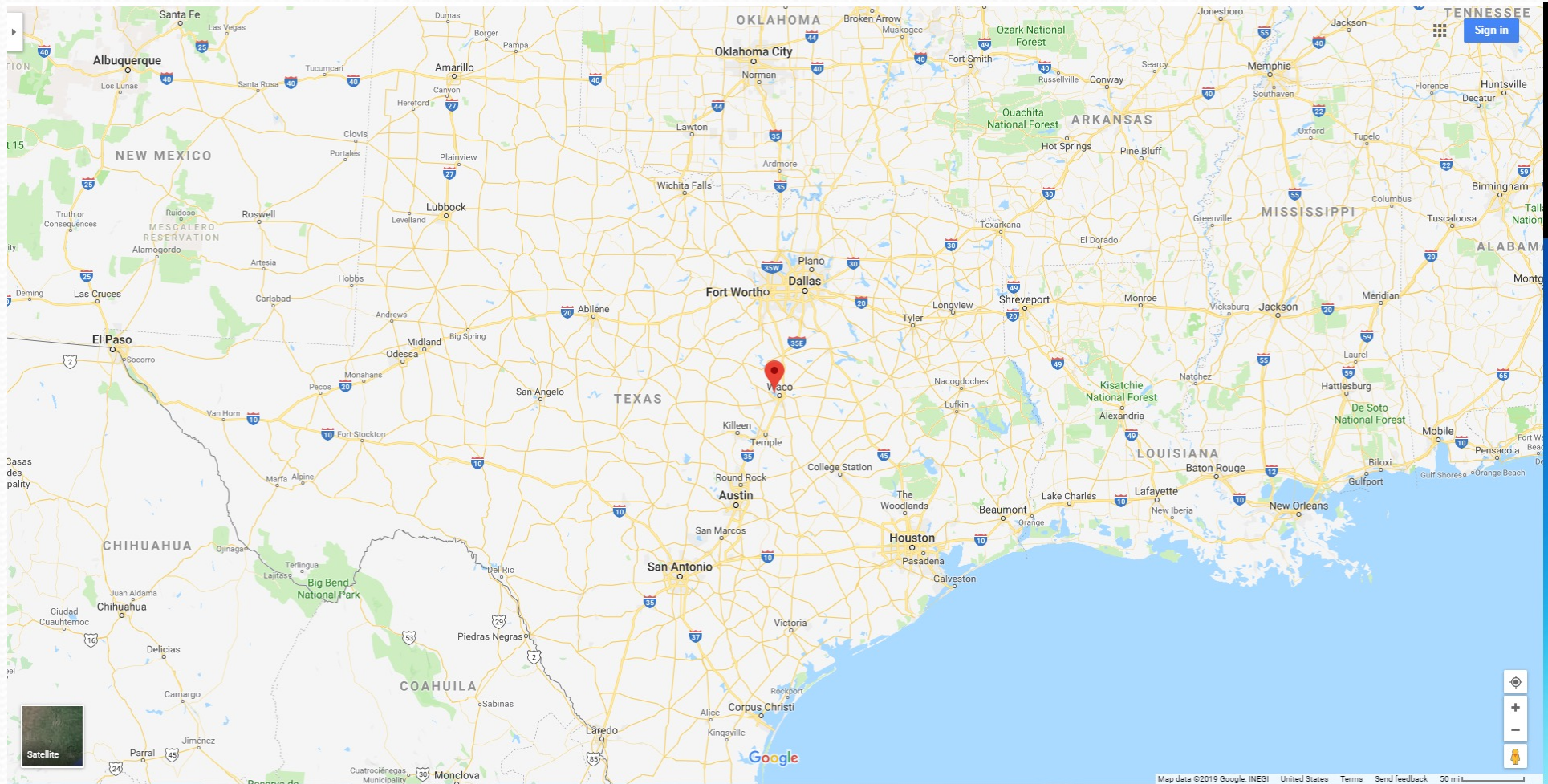
Client: Private Homeowner

Year: 2000

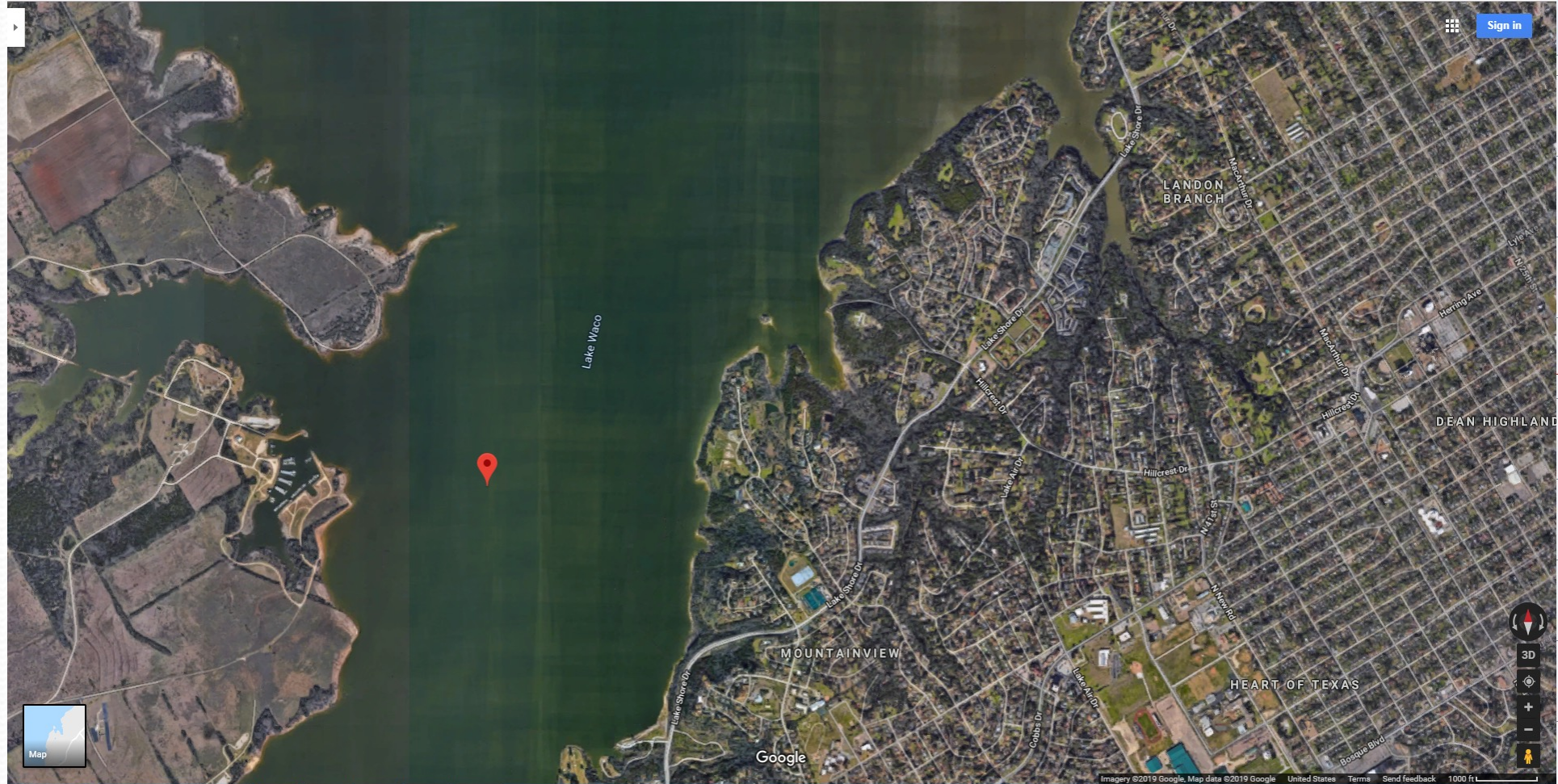
Project: Slope Stability Concern

Location: Waco, TX

Private Residence, Lake Waco TX



Private Residence, Lake Waco TX



SCENIC LAKE SHORE DRIVE...



BASIC PROJECT INFO

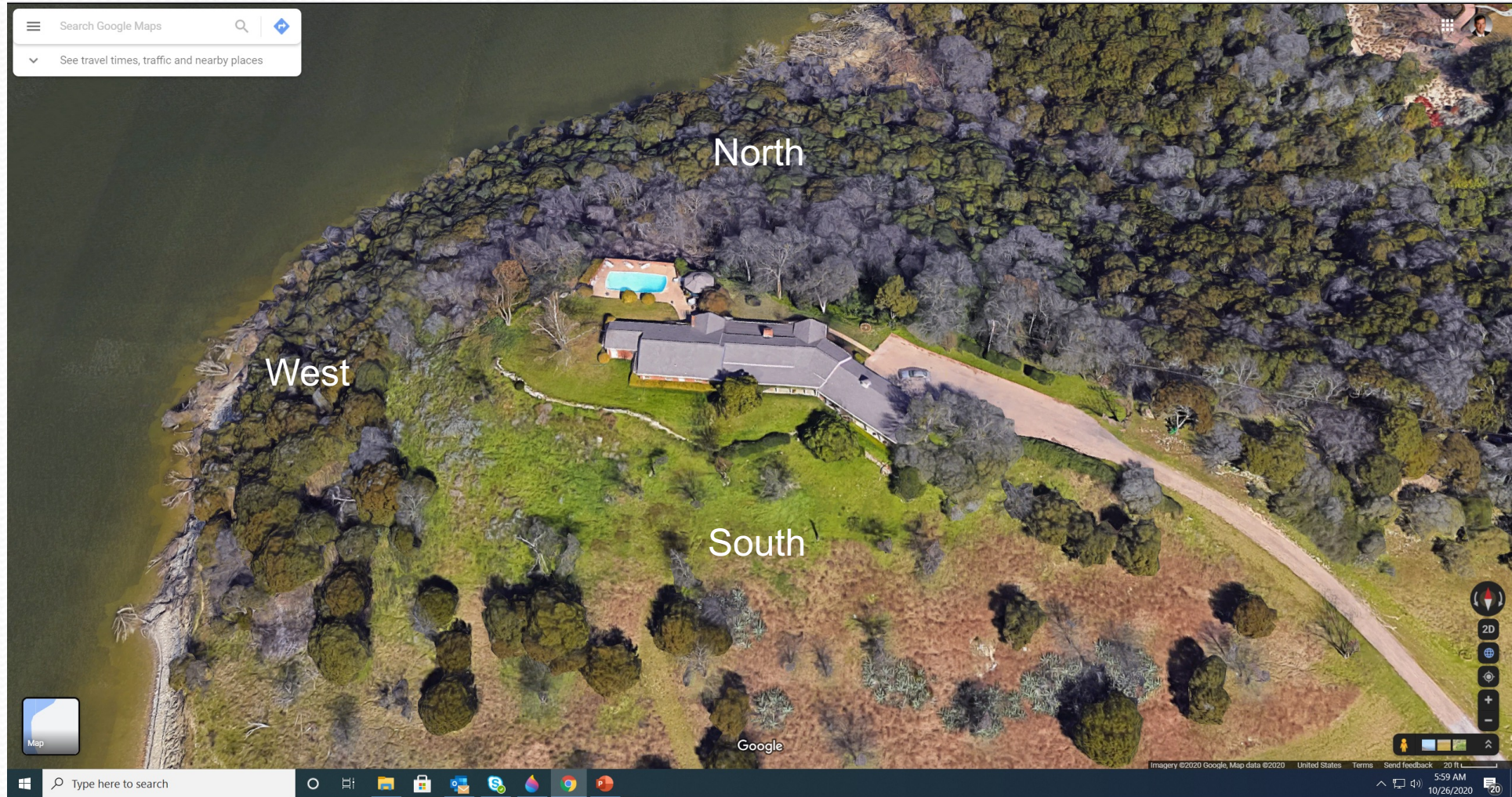
- Project: POTENTIAL SLOPE FAILURE
- PROJECT DURATION: 60 DAYS
- CONTRACT: \$15,000

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AS PERFORMED:

- 270 DAYS
- CONTRACT: \$15,000

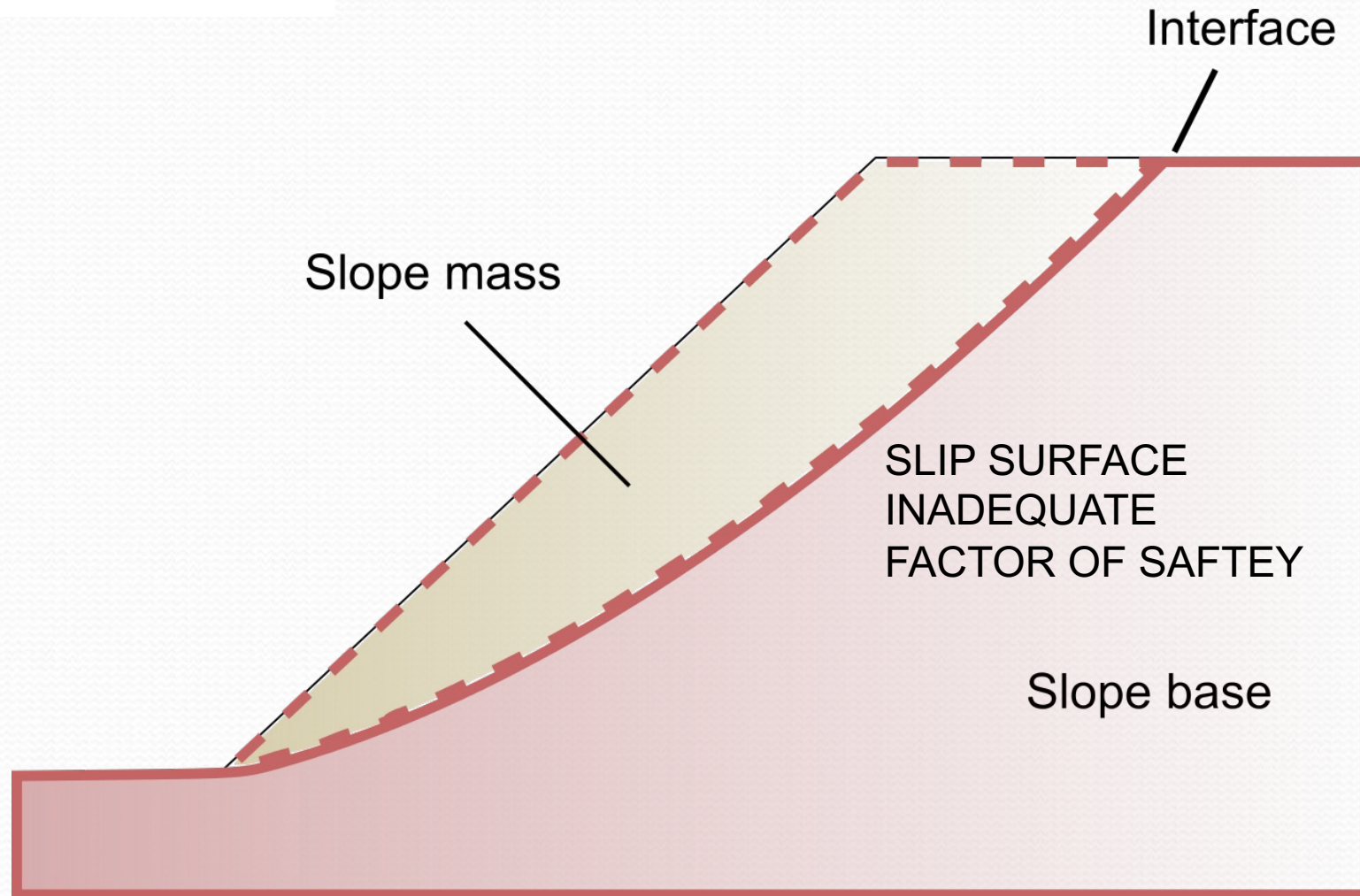
VERY SCENIC HOUSE ON A POINT... SLOPES ON THREE SIDES...



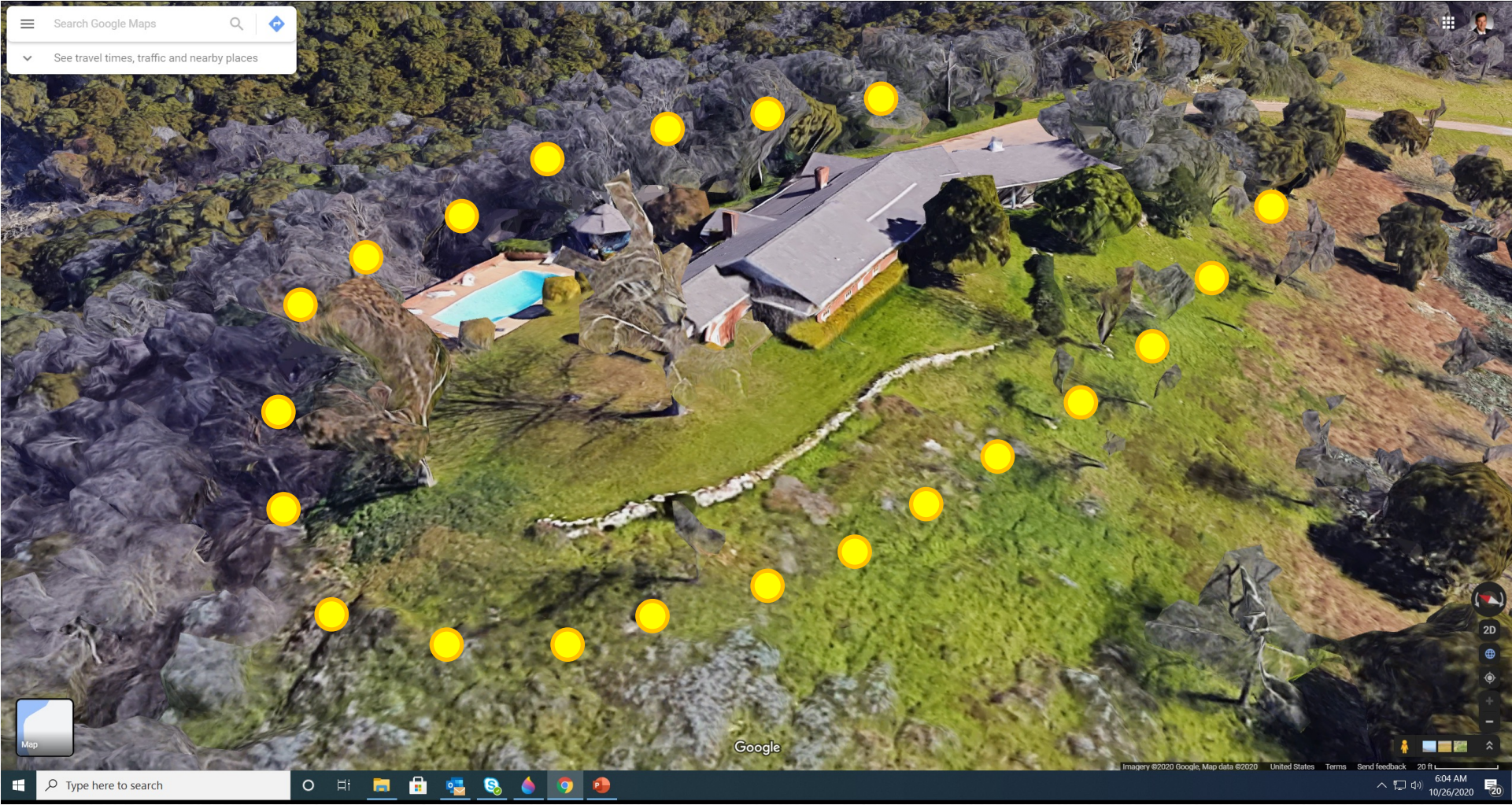
INCIPIENT SLOPE FAILURE... SOUTH AND NORTH...



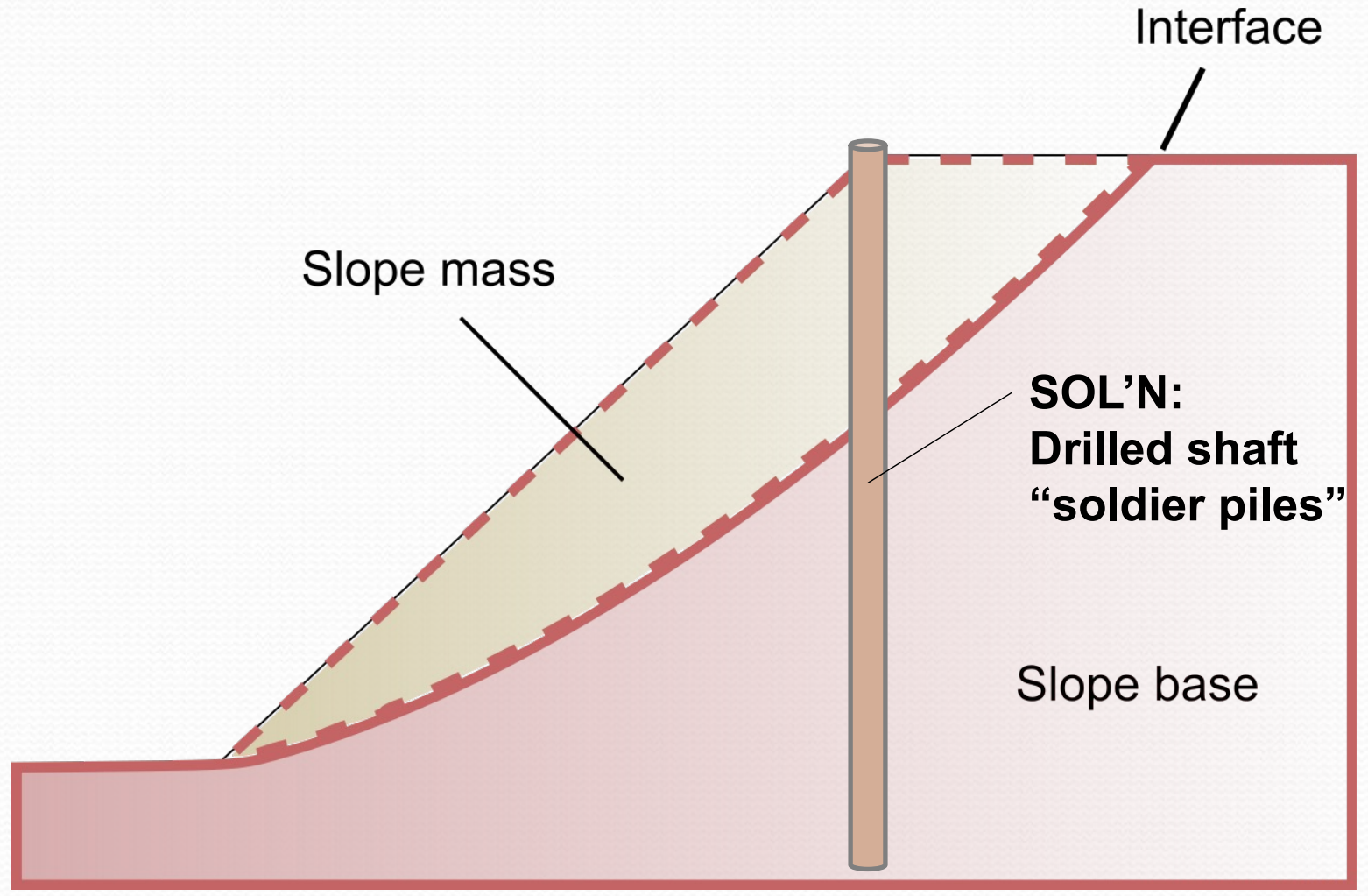
SLOPE FAILURE



PROPOSED SOLUTION... EARTH RETENTION SOLDIER PILES



PROPOSED SOLUTION... EARTH RETENTION SOLDIER PILES



THE PROJECT MANAGEMENT PROBLEM

- The situation
 - Mar... Apr... Jun... Aug... Dec...
- What do YOU think happened?
- Here's what happened

LESSONS LEARNED

1. Project management failures can... *innocently* happen
2. A project manager must know the status (budget, schedule) of his/her project *at all times*
3. The client must know, too
4. **No matter how painful**, the project manager must communicate with his/her client (and boss), both the good news and the bad news
5. There are no awards for submitting a project 6 months late
6. This type of failure is emotionally debilitating
7. A solid client relationship can help overcome disaster
8. Beware of the unpredictability of major changes to a project

SUMMARY

- A project is a temporary endeavor undertaken to produce a unique product or service
- It is common for business activities to be “project based”
- Projects can go well or they can go poorly
- The triple constraints on any project are scope, cost and time... assumes acceptable quality
- Project management is the application of skills, knowledge, tools and techniques to project activities to meet the project requirements

THANK YOU.